

WHAT IS CLAIMED IS:

1. A method for optimizing data transmissions, the method comprising the steps of:

receiving a request for bandwidth between a first point and a second point for a particular length of time;

identifying at least a first network device configurable to assist in providing the requested bandwidth between the first point and the second point;

configuring the identified at least a first network device to assist in providing requested bandwidth between the first point and the second point; and

responsive to the completion of the particular transaction, configuring the identified at least a first network device to disable the requested bandwidth between the first point and the second point.

2. The method of claim 1, wherein the step of identifying at least a first network device comprises the step of:

identifying at least a first optical device.

3. The method of claim 1, further comprising the step of:
dynamically generating device-specific commands for the at least a first
network device;
wherein the generated device-specific commands are configured to enable
the at least a first network device to assist in providing the requested bandwidth.
4. The method of claim 1, further comprising the step of:
retrieving a configuration record from a central repository of configuration
records, the retrieved configuration record being unique to the at least a first network
device and the retrieved configuration record including configuration information about
the at least a first network device.
5. The method of claim 4, further comprising the step of:
altering the configuration record to include an indication that the at least a
first device should be enabled to assist in providing the requested bandwidth.
6. The method of claim 5, further comprising the step of:
generating a device-specific command using the altered configuration
record;
wherein the generated device-specific command is for configuring at least
a first network device.

7. The method of claim 4, further comprising the step of:

altering the configuration record to include an indication that the at least a first network device should be configured to disable the requested bandwidth.

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8. A method for optimizing data transmissions, the method comprising the steps of:

- receiving a request for routing priority for a transaction, the request being originated by a content provider;
- identifying a service level available to the content provider;
- determining a data transmission priority level to which the content provider is entitled, the data transmission priority level based upon, at least, the identified service level and the request for routing priority;
- identifying at least a first transmission path accessible by the content provider, wherein the first transmission path includes at least a first network device;
- enabling a priority data handling feature associated with the at least a first network device; and
- responsive to completion of the transaction associated with the received request, disabling the enabled priority data handling feature.

9. The method of claim 8, wherein the transaction is defined at least partially in terms of a timeframe.

10. The method of claim 8, wherein the transaction is defined at least partially in terms of a volume of data.

11. The method of claim 8, wherein the step of identifying at least a first transmission path comprises the step of:

identifying at least a first router on that transmission path.

12. The method of claim 8, further comprising the step of:
generating device-specific commands for the at least a first network device;

wherein the generated device-specific commands are configured to enable the priority data handling feature associated with the at least a first network device.

13. The method of claim 8, further comprising the step of:
retrieving a configuration record from a central repository of configuration records, the retrieved configuration record being unique to the at least a first network device and the retrieved configuration record including configuration information about the at least a first network device.

14. The method of claim 13, further comprising the step of:
altering the configuration record to include an indication that the priority data handling feature should be enabled on the at least a first network device.

18.

15. The method of claim 14, further comprising the step of:
generating a device-specific command using the altered configuration
record;
wherein the generated device-specific command is for enabling the
priority data handling feature associated with the at least a first network device.

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16. A method for transferring data, the method comprising the steps of:

receiving a content transfer request;

determining the transfer priority of the content associated with the content transfer request;

identifying a path for transferring the content associated with the content transfer request, the identified path including a plurality of network devices;

configuring at least a first of the plurality of network devices to assist in a content transfer corresponding to the content transfer request; and

responsive to the completion of the content transfer request, returning the at least a first of the plurality of network devices to a default setting.

17. The method of claim 16, wherein the step of receiving the content transfer request comprises:

receiving a content provider identifier and a data volume indicator.

18. The method of claim 17, wherein the step of receiving the content transfer request further comprises:

receiving a data priority indicator.

19. The method of claim 18, wherein the step of receiving the data priority indicator comprises:

receiving a data type indicator.

20.

20. The method of claim 19, wherein the step of determining the priority comprises the step of:

determining the transfer priority based upon, at least, the data type indicator.

21. The method of claim 16, further comprising the step of:
generating device-specific commands for the at least a first of the plurality of network devices;

wherein the generated device-specific commands are configured to enable a plurality of a priority data handling feature associated with the at least a first of the plurality network devices.

22. The method of claim 21, further comprising the step of:
determining a bandwidth for transferring the content within the requirements of the determined transfer priority; wherein the generated device-specific commands are further configured to enable at least a first network device to assist in providing the determined bandwidth.

23. The method of claim 21, further comprising the step of:
retrieving a configuration record from a central repository of configuration records, the retrieved configuration record being unique to the at least a first network

device and the retrieved configuration record including configuration information about the at least a first network device.

24. The method of claim 23, further comprising the step of:

altering the configuration record to include an indication that at least a first device should be enabled to assist in providing the determined bandwidth.

25. The method of claim 24, further comprising the step of:

generating a device-specific command using the altered configuration record;

wherein the generated device-specific command is for configuring the identified at least a first network device.

26. The method of claim 24, further comprising the step of:

altering the configuration record to include an indication that the at least a first device should be configured to disable the determined bandwidth.

27. The method of claim 24, further comprising the step of:

altering the configuration record to include an indication that at least a first device should be enabled to assist in providing the determined bandwidth altering the configuration record to include an indication that the priority data handling feature should be enabled on the at least a second network device.

28. The method of claim 27, further comprising the step of:
generating a device-specific command using the altered configuration
record;
wherein the generated device-specific command is for enabling the
priority data handling feature associated with the at least a second network device.
29. The method of claim 23, further comprising the step of:
altering the configuration record to include an indication that a priority
data handling feature should be enabled at least on the a first network device.
30. The method of claim 29, further comprising the step of:
generating a device-specific command using the altered configuration
record;
wherein the generated device-specific command is for configuring the
identified at least a first network device.
31. The method of claim 30, further comprising the step of:
altering the configuration record to include an indication that the at least a
first device should be configured to disable the requested bandwidth.
32. The method of claim 30, further comprising the step of:

generating device-specific commands for the at least a first network device;
wherein the generated device-specific commands are configured to enable the at least a first network device to assist in providing the requested bandwidth.

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33. A method for optimizing data transmissions, the method comprising the steps of:

receiving a request for bandwidth between a first point and a second point for a select volume of data;

identifying at least a first network device configurable to assist in providing the requested bandwidth between the first point and the second point;

configuring the identified at least a first network device to assist in providing requested bandwidth between the first point and the second point; and

responsive to the completion of the particular transaction, configuring the identified at least a first network device to disable the requested bandwidth between the first point and the second point.

34. The method of claim 33, further comprising the step of:

dynamically generating device-specific commands for the at least a first network device;

wherein the generated device-specific commands are configured to enable the at least a first network device to assist in providing the requested bandwidth.